# PENGARUH PEMBERIAN KOMBINASI OBAT GAGAL JANTUNG TERHADAP KADAR KALIUM, NATRIUM DAN MAGNESIUM DARAH PADA TIKUS PUTIH JANTAN

**Tesis**

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# ABSTRAK

Penelitian tentang kombinasi obat gagal jantung dilakukan untuk mengetahui pengaruh kombinasi obat gagal jantung terhadap kadar kalium, natrium dan magnesium pada darah tikus putih jantan. Furosemide, kaptopril, bisoprolol, digoxin dan spironolakton termasuk obat gagal jantung. Obat gagal jantung memiliki efek samping diantaranya hipokalemia, hiponatremia dan hipomagnesemia. Penelitian ini bertujuan untuk melihat pengaruh pemberian kombinasi obat gagal jantung terhadap kadar kalium, natrium dan magnesium darah pada tikus. Hewan dibagi 5 kelompok yaitu kelompok I sebagai kontrol negatif, kelompok 2 kombinasi obat yaitu furosemid 40 mg, kaptopril 25 mg. Kelompok 3 kombinasi obat yaitu furosemid 40 mg, kaptopril 25 mg, digoksin 0,25 mg. Kelompok 4 kombinasi obat yaitu furosemid 40 mg, kaptopril 25 mg, digoksin 0,25 mg, spironolakton 25 mg. Kelompok 5 kombinasi obat yaitu furosemid 40 mg, kaptopril 25 mg, bisoprolol 5 mg, digoksin 0,25 mg , spironolakton 25 mg. Pemberian zat uji dilakukan selama 28 hari. Analisis kadar elektrolit menggunakan spektrofotometri serapan atom. Data diolah menggunakan uji ANOVA. Hasil penelitian menunjukkan rata-rata kadar kalium hari ke 0, 14, 28 adalah 12,09; 13,41; 12,11 mg/L, rata-rata kadar natrium hari ke 0, 14, 28 adalah 80,62; 83,41; 70,21 mg/L, rata-rata kadar magnesium hari ke 0, 14, 28 adalah 1,15; 1,20; 1,07 mg/L. Dari hasil penelitian dapat disimpulkan bahwa semua kelompok pemberian kombinasi obat tidak berpengaruh secara nyata terhadap kadar elektrolit namun dipengaruhi secara nyata oleh lamanya pemberian kombinasi obat gagal jantung.



Kata kunci : Furosemid, kaptopril, digoksin, bisoprolol, spironolakton

## ABSTRACT

Research on the combination of heart failure drugs was conducted to determine the effect of the combination of drugs for heart failure on potassium, sodium and magnesium levels in the blood of male white rats. Furosemide, captopril, bisoprolol, digoxin and spironolactone, including heart failure drugs. Heart failure drugs have side effects including hypokalemia, hyponatremia and hypomagnesemia. This study aims to look at the effect of the combination of heart failure drugs on blood potassium, sodium and magnesium levels in white rats. Animals were divided into 5 groups namely group I as a negative control, group 2 a combination of drugs namely furosemide 40 mg, captopril 25 mg. Group 3 drug combinations are 40 mg furosemide, 25 mg captopril, 0.25 mg digoxin. Group 4 drug combinations are 40 mg furosemide, 25 mg captopril, 0.25 mg digoxin, 25 mg spironolactone. Group 5 drug combinations are 40 mg furosemide, 25 mg captopril, 5 mg bisoprolol, 0.25 mg digoxin, 25 mg spironolactone. Provision of test substances carried out for 28 days. Analysis of electrolyte levels using atomic absorption spectrophotometry. Data were processed using ANOVA test. The results showed the average levels of potassium on days 0, 14, 28 were 12.09; 13.41; 12,11 mg / L, the average sodium level on days 0, 14, 28 is 80.62; 83.41; 70.21 mg / L, the average magnesium level for days 0, 14, 28 is 1.15; 1,20; 1.07 mg / L. From the results of this study it can be concluded that all drug combinations do not significantly affect electrolyte levels but are significantly affected by the duration of administration of heart failure drug combinations.



*Keywords : Furosemide, captopril, digoxin, bisoprolol, spironolacton*